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United States Patent [19]

Iguchi et al.

[11] Patent Number: **6,016,028**
[45] Date of Patent: **Jan. 18, 2000**[54] **GLASS BULB FOR COLOR PICTURE TUBE
AND THE SAME TUBE**5,216,321 6/1993 Kawamura et al. 313/408 X
5,536,995 7/1996 Sugawara et al.
5,552,663 9/1996 Iida et al.
5,606,217 2/1997 Hirai et al. 313/402 X

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FOREIGN PATENT DOCUMENTS

[73] Assignee: Sony Corporation, Japan

0239083A2 9/1987 European Pat. Off.
0281379A2 9/1988 European Pat. Off.
0612094A1 8/1994 European Pat. Off.

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[30] **Foreign Application Priority Data**

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[51] **Int. Cl.⁷** H01J 29/80; H01J 29/10;
H01J 31/00; H01J 61/30[57] **ABSTRACT**[52] **U.S. Cl.** 313/402; 313/461; 313/477 R;
313/479; 313/408; 220/2.1 A

A color picture tube is provided with a glass bulb in which the external surface of the effective display area of the face plate is formed substantially flat and a color selection mask, having the curvature projected toward the face plate, provided opposed to the internal surface of the face plate within the glass bulb. Therefore, the external surface is flat, the mechanical shock resistance characteristic is high, a tension can surely be applied to the color selection mask and moreover vibration of the color selection mask can be prevented even if external vibration is applied thereto.

[58] **Field of Search** 313/402, 403,
313/404, 407, 408, 461, 473-74, 477 R,
478-79; 220/2.1 A, 2.3 A, 2.1 R, 2.3 R

9 Claims, 4 Drawing Sheets

[56] **References Cited**

U.S. PATENT DOCUMENTS

4,570,101 2/1986 Campbell .
4,777,401 10/1988 Hosokoshi et al.
5,151,627 9/1992 Van Nes et al. 313/408 X